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EXAMINER

PIZIALI, ANDREW T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1771

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/740,261 | Applicant(s) POLAT ET AL. | |
| | Examiner Andrew T. Piziali | Art Unit 1771 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/9/04 & 12/18/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/30/05 & 10/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on 10/7/2005 has been entered. The examiner has withdrawn the objections to the specification based on the amendments to the specification and based on clarification provided in the interview conducted on 9/26/2005. The examiner has withdrawn the objection to the claims based on the amendments to claims 2 and 3 and the cancellation of claim 7. The examiner has withdrawn the rejection of claims 7 and 16 based on the cancellation of claims 7 and 16.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-6 and 17-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 5,538,595 to Trokhan et al. (hereinafter referred to as Trokhan).

Regarding claims 1, 5-6 and 17-20, Trokhan discloses a fibrous structure comprising at

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least two layers wherein at least one of the layers of the structure includes long (greater than about 2 mm) cellulosic fibers and at least one of the layers includes short (less than about 2 mm) cellulosic fibers (see entire document including column 6, lines 19-68, column 12, lines 31-65, and column 13, lines 25-67). Trokhan discloses that synthetic fibers may be utilized in combination with the cellulosic fibers (column 6, lines 48-52).

Regarding at least one layer forming a non-random pattern and having regions of different basis weight, Trokhan discloses that structure may be subjected to pattern densification wherein the structure is characterized by having a relatively high bulk field of relatively low fiber density and an array of densified zones of relatively high fiber density (column 15, line 60 through column 16, line 40). Therefore, Trokhan discloses that at least one layer may form a non-random pattern and have regions of different basis weight.

In the event that it is shown that the applied prior art does not disclose the claimed embodiment with sufficient specificity, the invention is obvious because the prior art specifically discloses the claimed constituents.

Regarding claim 5, Trokhan discloses that the short cellulosic fibers are hardwood fibers (column 6, lines 19-68, column 12, lines 31-65, and column 13, lines 25-67).

Regarding claim 6, Trokhan discloses that the long cellulosic fibers are softwood fibers (column 6, lines 19-68, column 12, lines 31-65, and column 13, lines 25-67).

Regarding claim 17, Trokhan discloses that the long cellulosic fibers are generally randomly distributed in at least one layer of the fibrous structure (Figures 1-3).

Regarding claim 18, Trokhan discloses that the fibrous structure may be creped, uncreped or embossed (column 6, lines 32-37 and column 9, lines 48-58).

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Regarding claim 19, Trokhan discloses that the fibrous structure may be combined with a separate structure to form a multi-ply article (column 6, lines 32-37 and column 13, line 60 through column 14, line 33).

Regarding claim 20, Trokhan discloses that a latex may be disposed on at least a portion of the unitary structure (column 10, lines 5-21).

Claim Rejections - 35 USC § 103

5. Claims 2-3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan as applied to claims 1, 5-6 and 17-20 above, and further in view of USPN 5,516,580 to Frenette et al. (hereinafter referred to as Frenette).

Regarding claims 2 and 3, Trokhan is silent with regards to a specific fiber length ratio between the synthetic fibers and the short fibers, therefore, it would have been necessary and thus obvious to look to the prior art for conventional ratios. Frenette provides this conventional teaching showing that it is known in the cellulosic and synthetic fiber mixture art to use cellulosic fibers that are shorter than the synthetic fibers. Frenette mentions a synthetic fiber to short fiber ratio of 1 to 25 (see entire document including column 2, lines 3-28 and column 3, lines 4-24). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the mixture with a synthetic fiber to short fiber ratio of 1 to 25, motivated by the expectation of successfully practicing the invention of Trokhan.

Regarding claim 8, Trokhan discloses that the short cellulosic fibers may have a length weighted average fiber length of less than about 1 mm (column 13, lines 25-42), but Trokhan does not mention an average cellulosic fiber width. Trokhan is silent with regards to an average cellulosic fiber width, therefore, it would have been necessary and thus obvious to look to the

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prior art for conventional cellulosic fiber widths. Frenette provides this conventional teaching showing that it is known in the cellulosic and synthetic fiber mixture art to use cellulosic fibers with a width of less than about 18 micrometers (column 3, lines 4-24). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a width of less than 18 micrometers, motivated by the expectation of successfully practicing the invention of Trokhan.

6. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan as applied to claims 1, 5-6 and 17-20 above, and further in view of WO 93/14267 to Manning.

Regarding claim 4, Trokhan is silent with regards to a PTP factor (diameter ratio) between the synthetic fibers and the short fibers, therefore, it would have been necessary and thus obvious to look to the prior art for conventional PTP factors. Manning provides this conventional teaching showing that it is known in the cellulosic and synthetic fiber mixture art to use synthetic and cellulosic fibers with a PTP factor of greater than about 0.75. Manning mentions synthetic fibers with a diameter of about 0.5 to 15 denier and cellulosic fibers with a diameter of about 4 denier (see entire document including page 7, lines 8-24 and page 8, lines 1-15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a PTP factor of greater than 0.75, motivated by the expectation of successfully practicing the invention of Trokhan.

Regarding claim 9, Trokhan does not mention length weighted average fiber length of the synthetic fibers or an average synthetic fiber diameter. Trokhan is silent with regards to the synthetic fiber diameter and length, therefore, it would have been necessary and thus obvious to

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look to the prior art for conventional synthetic fiber diameters and lengths. Manning provides this conventional teaching showing that it is known in the cellulosic and synthetic fiber mixture art to use synthetic fibers with a length weighted average fiber length of more than about 2 mm and a diameter of more than about 15 micrometers (page 7, lines 8-24). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use synthetic fibers with a length weighted average fiber length of more than about 2 mm and a diameter of more than about 15 micrometers, motivated by the expectation of successfully practicing the invention of Trokhan.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan as applied to claims 1, 5-6 and 17-20 above, and further in view of USPN 4,202,959 to Henbest et al. (hereinafter referred to as Henbest).

Trokhan discloses that the long cellulosic fibers may have a length weighted average fiber length of greater than about 2 mm (column 13, lines 25-42), but Trokhan does not mention the average cellulosic fiber width. Trokhan is silent with regards to specific cellulosic fiber widths, therefore, it would have been necessary and thus obvious to look to the prior art for conventional widths. Henbest provides this conventional teaching showing that it is known in the art to use cellulosic fibers with an average fiber width of less than 50 micrometers (see entire document including the Examples). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the long cellulosic fibers with an average fiber width of less than 50 micrometers motivated by the expectation of successfully practicing the invention of Trokhan.

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8. Claims 10-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan as applied to claims 1, 5-6 and 17-20 above, and further in view of any one of USPN 5,516,580 to Frenette or WO 93/14267 to Manning.

Regarding claim 10, Trokhan discloses that the long cellulosic fibers may have a length weighted average fiber length of greater than about 2 mm (column 13, lines 25-42), but Trokhan does not mention the average cellulosic fiber width. Trokhan is silent with regards to specific cellulosic fiber widths, therefore, it would have been necessary and thus obvious to look to the prior art for conventional widths. Frenette and Manning each provide this conventional teaching showing that it is known in the art to use cellulosic fibers with an average fiber width of less than 50 micrometers (see column 3, lines 4-24 of Frenette and page 7, lines 8-15 of Manning). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the long cellulosic fibers with an average fiber width of less than 50 micrometers motivated by the expectation of successfully practicing the invention of Trokhan.

Regarding claims 11-12, Trokhan discloses that synthetic fibers may be utilized in combination with the cellulosic fibers, but Trokhan does not specifically mention bicomponent synthetic fibers. Frenette and Manning each disclose that it is known in the cellulosic and synthetic fiber mixture art to use bicomponent synthetic fibers to improve adhesion between fibers (column 2, lines 3-28 and column 3, lines 4-42 of Frenette and page 6, lines 11-25 of Manning). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the synthetic fibers in any suitable known fiber configuration, such a bicomponent fiber configuration, because bicomponent fibers improve adhesion between the

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fibers and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 12, Frenette and Manning each disclose that the bicomponent fibers may be polyester and/or polyolefin based (column 3, lines 4-24 of Frenette and page 7, lines 6-15 of Manning).

Regarding claim 15, Frenette and Manning each disclose that the bicomponent fibers are heat fused to adhere the fibers (column 2, lines 19-28 of Frenette and page 8, line 17 to page 9, line 9 of Manning).

9. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan as applied to claims 1, 5-6 and 17-20 above, and further in view of any one of USPN 5,405,499 to Vinson or USPN 5,409,572 to Kershaw et al. (hereinafter referred to as Kershaw).

Trokhan is silent with regards to specific coarseness values, therefore, it would have been necessary and thus obvious to look to the prior art for conventional coarseness values. Vinson and Kershaw each provide this conventional teaching showing that it is known in the art to use a low coarseness, such as less than about 25mg/100m, because the softness of the product relates to the coarseness and a softer product is desired (see entire documents including column 1, lines 24-60 of Vinson and column 3, line 65 through column 4, line 31 of Kershaw). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the mixture of short cellulosic fibers and synthetic fibers with a coarseness value of less than about 25mg/100m motivated by the expectation of successfully practicing the invention of Trokhan.

Response to Arguments

10. Applicant's arguments filed 10/7/2005 have been fully considered but they are not persuasive.

The applicant asserts that Trokhan fails to teach or suggest at least one layer forming a non-random pattern and having regions of different basis weight. The examiner respectfully disagrees. Trokhan discloses that structure may be subjected to pattern densification wherein the structure is characterized by having a relatively high bulk field of relatively low fiber density and an array of densified zones of relatively high fiber density (column 15, line 60 through column 16, line 40). Therefore, Trokhan discloses that at least one layer may form a non-random pattern and have regions of different basis weight.

Conclusion

11. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

atp

g7B 11/3/05
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